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STATISTICAL BULLETIN
METROPOLITAN LIFE INSURANCE COMPANY
VOLUME 18 OCTOBER · 1937 NUMBER 10

Two Thousand Infants Killed Annually in Accidents

THE first year of life is full of perils. Not alone do babies, as is well known, succumb in large numbers to disease, but their death rate from accidents is also very high. This unfavorable aspect of infant mortality has been so much overshadowed by the excessive mortality from disease that until very recently it has been overlooked quite generally.

It should not be overlooked. Accidents to infants should be a matter of national concern, for every year more than 2,000 babies are killed in accidents of one kind or another—more than die, in an average year, from measles, scarlet fever, and diphtheria combined.

During the three-year period ending in 1935, of every 100,000 babies born alive in the United States 97 met with a fatal accident in the first year of life. That is a higher fatal accident rate than is found at any other age from 1 year up to age 21 for males. Among females a rate as high as this is not attained until late in life, or about age 64. It is a curious fact, indicative of the more venturesome nature of the male, that the accident rate of boys even in the first year of life is higher by about 20 percent than that of girl babies.

Canadian babies, it is interesting to observe, fared much better in the period 1933–1935 than did babies born in the United States, but they also had a very high accident death rate—76 deaths annually per 100,000 births. The higher mortality in the United States can be accounted for partly by the influence of our large Negro population on the total rate. Among colored infants the fatal accident rate is about double that among white infants.

One reason for the high mortality from accidents in early life is the large number of deaths from suffocation — mechanical suffocation, to state it in a technically descriptive term. Almost two fifths of the infant accident fatalities are charged to this class of accident. Data for the United States as a whole on specific types of accidents falling in this category are lacking, but analysis of the death records of Industrial policyholders of the Metropolitan Life Insurance Company show the

manner in which these accidents occur. Smothering by bed clothing was chiefly responsible, followed in order by smothering by adults sleeping in the same bed and by the child's sleeping on its face, usually with the face buried in the pillow. Deaths of this kind are of most frequent occurrence in the winter months, when heavy bed clothing is used and when the temptation for parents to take the baby into the bed is greatest. Soft pillows are a serious hazard and should not be used for very small children.

Foreign bodies, lodged principally in the air passages, caused about 9 percent of the deaths by accidents among babies. Aspiration of vomitus caused a goodly proportion of them, but food particles were also frequently reported as causing asphyxia. As a preventive measure against the important hazard of aspiring vomitus, it has been recommended that parents train infants to sleep on their sides. A variety of objects carelessly left within reach of infants were responsible for other deaths of this nature, including open and closed safety pins, marbles, and thumbtacks.

Burns, third in importance in the registers of infant accident fatalities, also caused about 9 percent of the deaths. Scalding by hot water, coffee, and tea, in cups or pans upset by children, accounted for the bulk of these deaths. Falling into hot water, falls against stoves and other hot objects were also represented. Nothing but the carefulness and vigilance of parents can prevent these horrible tragedies.

Another important type of accident is falls—chiefly falls out of crib, or bed, but including also many falls out of high chairs, out of windows, and falls down stairs. Poisonous substances and conflagrations accounted for a number of deaths. As might be expected, motor vehicle

Deaths Under Age 1 from Accidental Causes per 100,000 Live Births in the United States, 1933–1935

Cause of Death	Deaths per 100,000 Live Births	Percent of Total Accidental Deaths
Total Accidents	96.6	100.00
Poisoning by food	2.3	2.39
Other acute accidental poisonings*	2.2	2.31
Conflagration	3.6	3.73
Burns	8.9	9.21
Mechanical suffocation	37.4	38.72
Drowning	1.4	1.44
Falls	7.0	7.25
Excessive heat	3.8	3.94
Foreign bodies	8.9	9.22
Automobile accidents (total)†	5.0	5.17
Other accidents	16.1	16.62

*Gas excepted. †Includes collision with streetcar and railroad train.

fatalities are at a minimum among children under 1 year of age, but even in infancy about five in every 100,000 are killed by automobiles each year.

The accompanying table shows the death rate and percentage distribution of deaths among children under 1 year of age, for each of the principal types of accident over the period 1933–1935.

Very little consistent improvement has been observed in the mortality over a period of 15 years, either for total accidents or for the several types of accidents, with the exception of food poisoning.

Hundreds of babies could be saved every year to live out full, useful lives if parents were aware of the special accident hazards of early infancy and were instructed in methods of preventing them. Doctors and nurses are in the best position to give this instruction, since they, more than others, are in contact with and have the confidence of parents of the newborn.

Mortality Experience for the First Nine Months of 1937

THERE is now the excellent prospect that 1937 will establish a new record for low mortality among the 17,500,000 wage-earners and their dependents who are insured in the Industrial Department of the Metropolitan Life Insurance Company. In fact, unless there should be unsuspected developments during the final quarter of the year, a new minimal death rate is assured. This applies to both races, white and colored. Such fragmentary mortality data as are currently available for the population of the United States at large likewise point to a lower country-wide mortality rate this year than last, though the general population death rate is probably not destined to register a new low for all time.

A good indication of the improvement throughout the country is the fact that, in a group of 10 States containing 27 percent of the population of the entire country, the cumulative death rate, up to the end of July, was 3.3 percent lower than for the like part of last year. Particularly encouraging reports come from the North Central Division, where the mortality situation has improved distinctly this year in Illinois, Indiana, Minnesota, and South Dakota. A further indication of improvement is the fact that in 86 large cities, up to the week ended October 9th, there were only 241 more deaths reported in 1937 than in the corresponding part of 1936. This means that, with the usual increase in population between these years, this group of cities also have recorded a lower death rate this year than last.

New "Best Records"

The current year has been outstanding for the large number of new "best records" among the

insured wage-earning population.

Four successive months—May, June, July, and August—have registered lower mortality rates in 1937 than were ever previously recorded for these particular months. The crowning achievement, however, is the new minimal death rate of seven per 1,000 for September. This figure is not only a new low for the month of September itself but is the *lowest for any month of any year in the history of the Company's insured wage-earning population.*

New Lows for Various Diseases

The outstandingly favorable mortality record of 1937, to date, has been due, for the most part, to reductions in deaths from all of the more important diseases, save cancer. The three principal cardio-vascular-renal diseases are notable examples, as the heart disease death rate has dropped 2.1 percent since 1936; that for cerebral hemorrhage 5.1 percent, and that for chronic nephritis 7.5 percent. In addition, declines of 2.9 percent are in evidence for tuberculosis, 3.4 percent for pneumonia, and 6.6 percent for accidents. Thus, six of the seven causes of death whose mortality rates run in excess of 50 per 100,000, have registered more or less sizable reductions this year. The tuberculosis death rate among the white policyholders (40.1 per 100,000) marks a drop of substantially one half from the figure registered only 10 years ago. This is an extraordinary achievement in the public health campaign.

There have also been noteworthy improvements in diseases which are of primary public health interest even though by no means so important numerically as those just mentioned. For example, scarlet fever seems destined, for the first time, to close the year with a death rate below two per 100,000; diphtheria is almost sure to record a new low rate for the completed year; the syphilis death rate is markedly reduced; and, most important of all, diseases associated with the maternal state registered the signal drop of 12.7 percent, as compared with the first nine months of 1936. At the end of 1936 the death rate for these diseases was 7.7 per 100,000, which was then by far the lowest figure ever reported in the industrial population. For the first nine months of the current year the cumulative death rate was only 6.9. Assuming that there are no unfavorable developments during the final quarter of the year, there will be recorded a drop of more than 50 percent in the puerperal death rate, as compared with the figure recorded only 10 years ago. It is true that the declining birth rate, whereby fewer women have been subject to the risks of pregnancy and childbirth, has been a factor in reducing the puerperal death rate. But it is also true that the decline in deaths incidental to pregnancy and childbearing has exceeded the drop in the birth rate, and there can thus be no doubt that there has been a genuine decrease in the hazards of the puerperium.

Homicide is another cause of death which has been reported less frequently this year than ever before among the insured wage-earning population. Both whites and Negroes have shared in the decline.

A Few Causes Show Considerable Increases

The drop observed in the crude death rate for cancer, in 1936, now appears to have been only a temporary deviation from the practically

Death Rates per 100,000 Persons Exposed. First Nine Months of 1937, 1936, and 1935 Compared. By Color for Principal Causes of Death. All Ages. Metropolitan Life Insurance Company. Industrial Weekly Premium-Paying Business.*

Causes of Death	Death Rates per 100,000 Persons Exposed*					
	Total		White		Colored	
	Jan.-Sept. 1937	Jan.-Sept. 1936	Jan.-Sept. 1937	Jan.-Sept. 1936	Jan.-Sept. 1937	Jan.-Sept. 1936
Total—All Causes	844.0	855.0	774.0	776.5	1,392.4	1,467.2
Typhoid fever	.9	.9	.7	.7	2.1	2.7
Communicable diseases of childhood	7.6	6.7	7.7	7.0	6.8	4.2
Measles	1.2	1.1	1.2	1.2	1.1	.3
Scarlet fever	1.7	2.3	1.8	2.5	.5	.5
Whooping cough	3.3	1.6	3.2	1.5	4.0	2.1
Diphtheria	1.5	1.7	1.6	1.8	1.1	1.3
Influenza and pneumonia	92.5	90.1	81.3	77.4	179.8	188.9
Influenza	21.0	16.1	17.9	12.7	45.7	42.6
Pneumonia (all forms)	71.5	74.0	63.5	64.7	134.1	146.3
Bronchopneumonia	27.7	27.3	26.1	25.9	40.0	37.7
Lobar and undefined	43.8	46.7	37.4	38.8	94.2	108.6
Tuberculosis (all forms)	53.0	54.6	40.1	41.5	154.5	156.1
Tuberculosis of respiratory system	47.7	48.3	36.1	36.9	137.9	137.3
Syphilis, locomotor ataxia, and general paralysis of the insane	10.9	11.9	6.7	7.1	44.0	48.9
Cancer (all forms)	93.5	91.2	93.2	90.7	96.0	95.1
Diabetes mellitus	25.4	24.8	25.1	24.6	27.6	26.9
Alcoholism	1.9	2.2	1.6	1.9	3.8	4.0
Cerebral hemorrhage; apoplexy	59.1	62.3	52.0	54.0	113.9	127.0
Diseases of heart†	159.0	162.4	145.6	148.6	263.4	270.0
Diseases of the coronary arteries	29.9	24.6	31.0	25.3	21.4	18.7
Angina pectoris	7.9	8.6	7.8	8.6	8.4	8.5
Diarrhea and enteritis	9.0	8.2	9.0	7.9	9.0	10.1
Appendicitis	11.3	11.4	11.3	11.2	10.8	12.8
Chronic nephritis (Bright's disease)	55.2	59.7	47.9	50.6	112.2	130.5
Puerperal state—total	6.9	7.9	6.2	7.1	12.3	13.7
Total external causes	67.7	71.4	63.9	67.4	97.3	102.9
Suicides	8.8	8.7	9.0	9.0	7.8	6.4
Homicides	4.7	4.8	2.1	2.2	25.0	25.4
Accidents—total	54.1	57.9	52.8	56.2	64.5	71.1
Automobile accidents	20.2	18.7	20.1	18.4	20.5	20.5
All other diseases and conditions	152.6	156.4	142.8	144.9	229.1	246.2

*The rates for 1937 are subject to slight correction, since they are based on provisional estimates of lives exposed to risk.

†Excludes pericarditis, acute endocarditis, acute myocarditis, and angina pectoris.

continuous upward tendency observed over a long period of years. At any rate, the mortality from cancer has again increased slightly this year. The upward course of the mortality from diseases of the coronary arteries has likewise extended into 1937, and the death rate is at a new high.

The automobile accident death rate has risen sharply and, by the end of the year, may closely approach, or even exceed, the previous high of 22 per 100,000 registered in 1931.

The health record for 1937, to date, is that of a year whose start was anything but promising on account of the high prevalence of influenza and respiratory diseases during the first quarter, but which now gives good promise of breaking all records for low mortality in the Industrial population.

Improved Economic Conditions Bring More Patients to Hospitals

IN THE first six months of 1937, a year with health conditions as excellent as those in 1936, admissions to 47 representative and leading voluntary hospitals increased 7 percent over the figures for the corresponding months of the preceding year. That this finding is referable essentially to improving economic conditions is borne out by the more detailed analysis of the figures. The increase of 7 percent in total patients is the resultant of an increase of 3.0 percent in ward patients and no less than 12.3 percent in the number of private and semiprivate patients.

These figures are for the group of 47 hospitals as a whole. The increase, however, was not confined to any one section of the country. As shown in the table on page 8, in the metropolitan area of New York a group of 19 hospitals reported an increase of 9.6 percent in private and semiprivate admissions as against a 3.7 rise among ward patients; in 12 hospitals situated in New England and Middle Atlantic cities the corresponding increases were 13.5 and 4.1 percent. A group of 11 hospitals in the North Central section of the country showed increases of 14.4 and 0.7 percent, while the combined increases for four Southern hospitals amounted to 11.3 percent in the private and 1.1 percent in the ward admissions.

In the entire group of 47 hospitals only five failed to register an increase among their private and semiprivate patients. One institution showed an increase of more than 70 percent in its private and semiprivate admissions; in another the increase amounted to 30 percent; while in eight others the rise in paid admissions equaled or exceeded 20 percent. On the other hand, in 19 of these hospitals, ward registrations actually decreased during the period under discussion, while in eight others increases of less than 3 per-

cent in this type of patient were recorded.

When it is recalled how hard hit financially most of these hospitals were during the depression, how difficult it was for them to meet the demands for ward service, while their earned income from paying patients was seriously curtailed, the chief cause and consequence of the present trend in hospitalization become clear. Undoubtedly, the rise in private patients reflects the recent improvement in business conditions throughout the country. The rise in earned income has enabled a larger number of people to pay for private accommodations in hospitals. Also a certain number are now taking advantage of their improved economic status to have conditions corrected which, though needing attention, were neglected during the years of the depression.

Another probable cause of the increased admission to hospitals, especially in the private and semiprivate departments, is the rapid growth of group hospitalization plans during the last few years. On January 1, 1933, there was but one nonprofit, free-choice hospital service plan in the United States. About 2,000 persons were enrolled in this plan. Today, there are at least 37 such plans in successful operation with an enrollment of close to 1,000,000 persons. At least 27 of the 47 hospitals listed in the table on page 8 participate in one or another of these plans. Many patients are thus enabled to seek private or semiprivate service which would otherwise be denied them, and unquestionably the group hospitalization plans have benefited most of the hospitals that have participated in them.

However, that this is not the main factor responsible for the improved financial condition of hospitals is proved by the fact that there has been just as large an increase in private and semiprivate patients in nonparticipating hospitals as in those which have accepted the hospitalization plans. In participating hospitals, according to present information, the combined rate of increase for private patients was 10.1 percent as against a bare increase of 0.2 percent among ward patients; in the remaining hospitals the corresponding increases were 14.8 and 6.4 percent. Apparently, the recent increase in hospital occupancy must be attributed primarily to the improved business outlook.

That the ward patients have not increased as rapidly as private and semiprivate patients is no doubt due in part to the fact that in most of these hospitals ward service is operated practically to capacity most of the time, not only in periods of depression but in prosperous years as well. Possibly, if more ample facilities were available the rise in ward patients would more nearly equal that of paid admissions. However, it is significant that in the reports of 11 large municipal hospitals which care for charity patients only, the total admissions actually declined from 134,168 during the first six months of 1936, to 132,323 during

the same period of 1937, a decrease of 1.4 percent.

Thus the present figures seem to indicate that the trend of private and semiprivate admissions to hospitals is a reliable barometer of contemporary economic conditions. Hospitals, like other social institutions, have benefited from the recent improvement in business.

Comparison of Admissions in 47 Leading Hospitals of the United States, First Six Months of 1936 and 1937

HOSPITAL AND REGION	ADMISSIONS								
	TOTAL PATIENTS			PRIVATE AND SEMIPRIVATE PATIENTS			WARD PATIENTS		
	1937	1936	Percent Increase	1937	1936	Percent Increase	1937	1936	Percent Increase
TOTAL 47 HOSPITALS.	286,435	267,613	7.0	129,867	115,661	12.3	156,568	151,952	3.0
19 Hospitals in the Metropolitan Area of New York City.	109,318	103,170	6.0	42,740	38,985	9.6	66,578	64,185	3.7
12 Hospitals in New England and Middle Atlantic Cities.	74,760	69,253	8.0	31,984	28,173	13.5	42,776	41,080	4.1
11 Hospitals in North Central Cities.....	76,375	70,715	8.0	43,047	37,631	14.4	33,328	33,084	0.7
4 Hospitals in Southern Cities.....	22,079	20,912	5.6	10,186	9,150	11.3	11,893	11,762	1.1
1 Hospital on the Pacific Coast.....	3,903	3,563	9.5	1,910	1,722	10.9	1,993	1,841	8.3

Geographical Aspects of Poliomyelitis

AMONG the few unfavorable items in our national health this year was a fairly severe epidemic of poliomyelitis. According to the current weekly State reports issued by the United States Public Health Service, the disease showed itself first in certain of the Southern States, in particular, Mississippi, Arkansas, Oklahoma, and Texas. This course of events deviated somewhat from our usual experience with infantile paralysis; in prior epidemics the concentration tended to be rather in the northern parts of the country. From its start in the Southern States, the epidemic spread rapidly northward, following roughly the line of the Mississippi Valley. Thus the cases reported reached notable numbers successively in the States of Mississippi, Louisiana, Texas, Tennessee, Arkansas, Missouri, Kentucky, Illinois, Iowa, Minnesota, and Wisconsin, approximately in the order named. Spreading from this area the epidemic gradually involved the States of Indiana, Michigan, and

Ohio. Simultaneously our Canadian neighbors suffered severely from the disease, especially in the Province of Ontario. Whether this was a continuation of the epidemic in the United States, or one which started independently, is not yet determined.

In making comparisons of the prevalence of poliomyelitis from year to year, it is necessary to bear in mind that epidemics of the disease have in the past rarely struck twice in the same location in succeeding years, or even in a series of three years. For this reason direct comparison of the figures for the country as a whole in successive years is somewhat misleading, because the number of cases would naturally be greater in years when the disease attacks densely populated regions such as New England or the Middle Atlantic States, than in years when less populated areas are affected. For example, the year 1927 was characterized by a serious epidemic in Northeastern United States. The years 1928 and 1929 were relatively free from poliomyelitis, but in 1930 the West North Central section of the country suffered materially, while at this time New England and the Middle Atlantic States were comparatively exempt. Severe as was this epidemic in the West North Central States, the number of victims did not reach figures of the magnitude observed in the Northeastern States, either in 1927 or in 1931. This is readily understood since the West North Central States are much less densely populated than the States on the North Atlantic seaboard. The year 1931 again brought a severe epidemic in the Northeastern section of the country, with the number of victims reflecting the greater density of the population. In 1934 the disease struck on the Pacific Coast, with California experiencing the worst epidemic in its history. The epidemic of 1935 started in North Carolina and spread to the adjacent States of Virginia, Tennessee, and Kentucky; somewhat later in the season New England, along with New York and New Jersey, were severely affected. Although the disease was practically unknown in this country in epidemic form prior to 1892, in the past decade no State throughout the Union has been entirely free from its visitation. In fact, the United States is one of the countries most severely afflicted with poliomyelitis.

There is one redeeming feature about the existing situation. The virulence of the disease seems to have abated somewhat in recent epidemics. This may be due, however, to the fact that improved diagnostic methods have enabled us to recognize a larger number of abortive and nonparalytic cases in recent years than was possible a decade ago. As a consequence, there are now fewer deaths in proportion to the total cases reported than formerly. Improvements in treatment also enable us today to prevent many cases of paralysis and resultant crippling and to reduce the proportion of cases ending fatally.

Health Record for September 1937

THE September death rate of seven per 1,000 was the lowest ever recorded for any single month in the history of the Metropolitan Industrial policyholders. Marked reductions in mortality, as compared with September of last year, were recorded for tuberculosis, heart disease, pneumonia, and accidents.

Reports concerning the prevalence of communicable diseases throughout the general population of the United States show, however, that there were more cases of diphtheria, poliomyelitis, and scarlet fever during September than in either the preceding month of August or in September of last year. Measles and smallpox were less prevalent than in August, but more cases were reported than during September 1936.

Items of special public health interest recently reported are as follows: The Children's Hospital, Pittsburgh, Pa., has been endowed with a trust fund of $1,000,000 for perpetual research into the causes, treatment, and cure of diabetes in the youth of the Pittsburgh area. The first of four courses on the study of malaria, to be conducted in different parts of the country by the United States Public Health Service, has been started at the Florida State College. The United States Public Health Service, in cooperation with the American Red Cross, is conducting a survey of pellagra in four counties of northern Arkansas. A national foundation is being organized to unify the fight against infantile paralysis. It is planned to finance the new foundation through a nationwide solicitation of private contributions in addition to receipts from the President's birthday celebrations which are held throughout the country each year. A clinic for the study of rheumatism has been established at the University of Michigan Hospital, Ann Arbor, by the Rackham Fund.

The following table shows the mortality among Industrial policyholders for September 1937, August 1937, and September 1936, together with the cumulative rates for the first nine months of each year.

METROPOLITAN LIFE INSURANCE COMPANY

Death Rates per 100,000 for Principal Causes. Weekly Premium-Paying Business in Industrial Department. All Ages (Annual Basis)*

MONTHS OF SEPTEMBER 1937, AUGUST 1937, AND SEPTEMBER 1936.

CAUSES OF DEATH	ANNUAL RATE PER 100,000 LIVES EXPOSED*				
	September 1937	August 1937	September 1936	Cumulative January-September	
				1937	1936
TOTAL—ALL CAUSES	703.5	719.9	712.4	844.0	855.0
Typhoid fever	1.7	1.3	1.6	.9	.9
Measles	.5	.4	.3	1.2	1.1
Scarlet fever	.5	.5	.4	1.7	2.3
Whooping cough	2.8	3.6	1.6	3.3	1.6
Diphtheria	1.0	.9	1.2	1.5	1.7
Influenza	2.3	2.3	2.9	21.0	16.1
Tuberculosis (all forms)	43.6	48.6	48.5	53.0	54.6
Tuberculosis of respiratory system	39.2	44.0	43.2	47.7	48.3
Syphilis, locomotor ataxia, and general paralysis of the insane	9.9	9.4	9.6	10.9	11.9
Cancer (all forms)	90.5	93.5	90.4	93.5	91.2
Diabetes mellitus	22.0	20.7	21.3	25.4	24.8
Cerebral hemorrhage; apoplexy	50.8	48.7	51.0	59.1	62.3
Diseases of the heart†	123.7	128.3	129.2	159.0	162.4
Diseases of the coronary arteries	29.3	23.1	19.9	29.9	24.6
Angina pectoris	6.8	6.0	7.3	7.9	8.6
Pneumonia (all forms)	23.5	27.4	29.1	71.5	74.0
Diarrhea and enteritis	17.8	16.8	12.9	9.0	8.2
Appendicitis	12.0	10.4	12.0	11.3	11.4
Chronic nephritis (Bright's disease)	46.1	46.1	46.7	55.2	59.7
Puerperal state—total	5.9	6.7	7.0	6.9	7.9
Suicides	9.1	9.4	7.3	8.8	8.7
Homicides	4.3	3.8	4.8	4.7	4.8
Accidents—total	54.9	62.2	61.9	54.1	57.9
Automobile accidents	22.9	22.2	23.7	20.2	18.7
All other diseases and conditions	144.7	149.6	145.2	154.4	158.6

*The rates for 1937 are subject to slight correction, since they are based on provisional estimates of lives exposed to risk.

†Excludes pericarditis, acute endocarditis, acute myocarditis, and angina pectoris.

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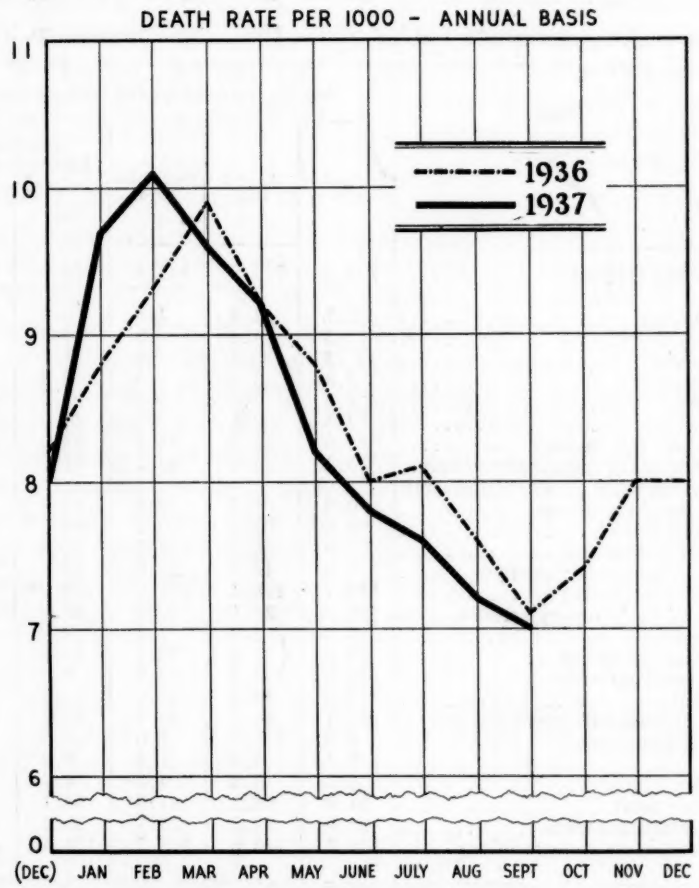
DEATH RATES FROM ALL CAUSES

METROPOLITAN LIFE INSURANCE CO. - INDUSTRIAL DEP'T
WEEKLY PREMIUM-PAYING BUSINESS - TOTAL PERSONS



Rates are provisional for 1937

METROPOLITAN LIFE INSURANCE COMPANY PRESS
NEW YORK, U.S.A.
78648